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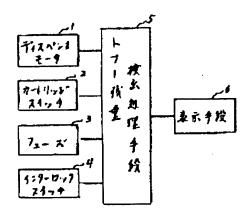
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TITLE

REMAINING TONER QUANTITY

**DETECTING AND PROCESSING** 

**SYSTEM** 



ABSTRACT: PURPOSE: To accurately detect a remaining toner quantity in a toner cartridge system.

CONSTITUTION: A front interlock switch 4 is monitored by a remaining toner quantity detecting and processing means 5, and then, it is judged by the remaining toner quantity detecting and processing means 5 that a cartridge has been already replaced based on the on/off of the cartridge switch 2 when the interlock switch is open, or by detecting the presence or absence of a fuse 3 installed in the toner bottle of the cartridge when the power is turned on and when the front interlock switch is turned on, it is judged that the cartridge has been already replaced. And the remaining toner quantity is initialized by the remaining toner quantity detecting and processing means, and thereafter, an on-time is integrated by confirming by use of a flag whether or not a dispense motor 1 is turned on. And since the toner replenishing quantity per unit on-time of the dispense motor is experimentally recognized in advance, the toner replenishing quantity is obtained from the integrated value of the on-time of the dispense motor, and the remaining toner quantity can be detected by subtracting from the initial value.

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